

carbohydrate present in the urine collected in step b); and

A 1 d) comparing the urine levels of said at least one signature carbohydrate in said patient with a control urine sample, wherein an increase in the urine levels of said at least one carbohydrate in said patient is indicative of the precancerous condition of esophageal mucosa in said patient.

Please add new claims 5-12 as follows:

5. (New) The method of claim 3, wherein said precancerous condition of esophageal mucosa is Barrett's esophageal condition.

6. (New) The method of claim 3, wherein said urine is collected overnight following the administration of said signature carbohydrate.

7. (New) The method of claim 3, further comprising the steps of:

A 2 e) obtaining a tissue sample from the esophageal mucosa of said patient;

f) examining tight junction (TJ) leakiness of said tissue sample; and

g) comparing the TJ leakiness of said tissue sample from said patient with that from a control tissue sample, wherein an increase in the TJ leakiness of said tissue sample from said patient is indicative of the precancerous condition of esophageal mucosa in said patient.

8. (New) The method of claim 7, wherein said TJ leakiness is correlated with altered expression levels of a protein

selected from the group consisting of α PKC and ZO-1.

9. (New) The method of claim 7, wherein said TJ leakiness is correlated with reduced phosphorylation state of occludin.

10. (New) (Amended) A method of diagnosing Barrett's esophageal condition in a patient comprising the steps of:

a) administering to said patient an appropriate amount of sucrose, said patient not having ulcerative disease of the GI tract nor bleeding therefrom;

b) collecting urine voided by said patient during a suitable time period after the administration of sucrose;

c) measuring levels of sucrose present in the urine collected in step b); and

d) comparing the urine levels of sucrose in said patient with a control urine sample, wherein an increase in the urine levels of sucrose in said patient is indicative of the Barrett's esophageal condition;

e) obtaining a tissue sample from the esophageal mucosa of said patient;

f) examining tight junction (TJ) leakiness of said tissue sample; and

g) comparing the TJ leakiness of said tissue sample from said patient with that from a control tissue sample, wherein an increase in the TJ leakiness of said tissue sample from said patient is indicative of the Barrett's esophageal condition in said patient.

11. (New) The method of claim 10, wherein said TJ leakiness is correlated with altered expression levels a protein selected